(FILE 'HOME' ENTERED AT 16:47:01 ON 15 APR 2005)

FILE 'CAPLUS, MEDLINE, AGRICOLA, CABA' ENTERED AT 16:47:24 ON 15 APR 2005

```
L1            35 S SOIL AND CHLOROFORM EXTRACTION
L2            26 DUP REMOVE L1 (9 DUPLICATES REMOVED)
L3             0 S TORVISK/AU
                 E TORVISK/AU
                 E TORSVIK
L4             6 S E3

=>
```

L2 ANSWER 13 OF 26 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 4

ACCESSION NUMBER: 95:62660 AGRICOLA
DOCUMENT NUMBER: IND20483645
TITLE: Acid-rain-induced changes in cuticles and Ca distribution in Scots pine and Norway spruce seedlings.
AUTHOR(S): Turunen, M.; Huttunen, S.; Back, J.; Lamppu, J.
CORPORATE SOURCE: University of Lapland, Rovaniemi, Finland.
AVAILABILITY: DNAL (SD13.C35)
SOURCE: Canadian journal of forest research, Aug 1995. Vol. 25, No. 8. p. 1313-1325
Publisher: Ottawa, National Research Council of Canada
CODEN: CJFRAR; ISSN: 0045-5067
NOTE: Includes references
PUB. COUNTRY: Canada; Ontario
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English
SUMMARY LANGUAGE: French

AB Seedlings of Scots pine (Pinus sylvestris L.) and Norway spruce (Picea abies (L.) Karst.) were subjected to acid rain irrigation at pH 7, pH 4, and pH 3 three times a week during the growing seasons of 1986-1989 in a field experiment. Scanning and transmission electron microscopy, energy dispersive spectrometry, contact angle measurements, and **chloroform extraction** of waxes were used to detect physicochemical changes in the needle cuticles. The first detectable symptoms of acid rain were observed after 5 weeks of acid rain treatment at pH 3 and pH 4, which resulted in few CaSO4 crystallites on visibly undamaged pine and spruce needle surfaces. After 7 weeks of acid rain treatment there were CaSO4 crystallites scattered over the whole needle surface area and erosion of the epicuticular waxes could be observed occasionally. CaSO4 crystal formation later decreased, especially on the needles of seedlings treated at pH 3. Ca concentrations in the needles and roots of the seedlings and in the **soil** in the boxes were higher in the pH 3 treatments than elsewhere. The more abundant deposition of Ca oxalate crystallites on the inner walls of the epidermal and hypodermal cells of the spruce needles than on their outer walls was probably also connected with Ca leaching, caused by acid rain. Acid rain also delayed wax synthesis, as 2-month-old pine needles exposed to pH 3 and pH 4 had about 50% less wax than the water controls in early August. The needle surfaces of the southern provenances of spruce and pine seedlings were slightly less wettable after pH 4 treatment than after the control water treatment, because they probably benefitted from N and S compounds in the irrigation water. The needle surfaces were more wettable in the pH 3 and water control seedlings than in the other treatments.

L2 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 1991:531184 CAPLUS
DOCUMENT NUMBER: 115:131184
TITLE: Calibration of a rapid direct **chloroform extraction** method for measuring **soil** microbial biomass carbon
AUTHOR(S): Gregorich, E. G.; Wen, G.; Voroney, R. P.; Kachanoski, R. G.
CORPORATE SOURCE: Land Resourc. Res. Cent., Agric. Canada, Ottawa, ON, K1A 0C6, Can.
SOURCE: Soil Biology & Biochemistry (1990), 22(7), 1009-11
CODEN: SBIOAH; ISSN: 0038-0717
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A modified direct extraction method for measuring **soil** microbial biomass C is described. In situ labeling of the microbial biomass was used to calibrate the method and kEC factors, to convert the data to biomass values, were calculated The relationship between extracted organic C and ATP was also examined

L2 ANSWER 18 OF 26 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 89:61955 CABA
DOCUMENT NUMBER: 19891934588
TITLE: Determination of biomass N in some agricultural **soils** of Punjab, Pakistan
AUTHOR: Azam, F.; Yousaf, M.; Hussain, F.; Malik, K. A.
CORPORATE SOURCE: Soil Biology Div., Nuclear Inst. Agric. Biol., Faisalabad, Pakistan.
SOURCE: Plant and Soil, (1989) Vol. 113, No. 2, pp. 223-228. 4 tab. 21 ref.
ISSN: 0032-079X
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101

AB Microbial biomass N was measured in 18 agricultural **soils** collected from Punjab, Pakistan using a chloroform fumigation extraction method (CFEM), a **chloroform extraction** method (CEM), and a chloroform fumigation-incubation method (CFIM) using anaerobic incubation. IN CFEM, the **soil** samples were exposed to chloroform vapour for 24 h followed by estimation of the K2SO4-extractable N whereas in CEM, **soil** samples were directly extracted with K2SO4 containing 10% chloroform. In the CFIM, fumigated and unfumigated samples were incubated for 15 days under anaerobic conditions and the NH4-N accumulated in the **soils** was used to calculate biomass N. The biomass N determined by CEM accounted for 2.8 to 13.8% of the total **soil** N; the average value for all **soils** was 6.9%, an almost similar variation (2.6 to 14.8%) was observed for the CFEM. The biomass N determined by the two methods was highly correlated ($r = 0.89$, $P < 0.01$). Biomass N estimated by CFIM in **soils** incubated under anaerobic conditions accounted for 6.1 to 13.6% of the total **soil** N but showed no significant correlation with biomass N determined by either CFEM or CEM.

L2 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:271189 CAPLUS
DOCUMENT NUMBER: 137:241616
TITLE: Application of gas chromatography-mass spectrometry to the analysis of nitrogen mustard and the evaluation of extraction methods used for its handling
AUTHOR(S): Karayilanoglu, Turan; Berenshtein, Eduard; Kenar, Levent; Kitrossky, Nahum; Kisa, Ucler; Chevion, Mordechai
CORPORATE SOURCE: Department of NBC, Gulhane Military Medical Academy, Ankara, Turk.
SOURCE: Turk Biyokimya Dergisi (2001), 26(3), 95-98
CODEN: TBDUAL; ISSN: 0250-4685
PUBLISHER: Turk Biyokimya Dergisi
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors describe a procedure based on the extraction of nitrogen mustard (HN2) (2,2'-dichloro-N-Me diethylamine hydrochloride) with organic solvents like methanol, hexane, dichloromethane, and iso-Pr alc./chloroform sep. followed by trimethylsilyl derivatization and gas chromatog.-mass spectrometric (GC-MS) detection. Compared to recovery efficiencies, it was observed that the recoveries in both dichloromethane and iso-Pr alc./ **chloroform extns**. were better than other organic solvent extns. as superior to 80%. In this study, the sample handling and anal. procedure were applied to **soil** samples, and HN2 was identified during GC-MS analyses of **soil** exts. on capillary column. According to the oven temperature program used in GC-MS method which is determined by taking into consideration the phys. and chemical properties of HN2, the authors evaluated the intraday and interday precision expression as CV. The intraday precision was determined between 3.1 and 6.5% CV range, and the interday precision was also found between 3.5 and 6.5% CV. The recovery was also found between 87.1 and 95.4%. Taking into consideration the results of this study, the authors concluded that the GC-MS method may be recommended for measuring the quantity of HN2 in micrograms on the conditions that extraction methods with high recovery be used employing the trimethylsilyl derivatization process.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT